



SAS Superstructure

Location: 04-SF-80-13.2 / 13.9

Client Name: CalTrans

Run date 21-Nov-14

Time 11:12 PM

Daily Diary Report by Bid Item

Contract No.: 04-0120F4

Diary #: 616 Const Calendar Day: 36 Date: 10-Jul-2012 Tuesday

Inspector Name: Bruce, Matt Title: Transportation Engineer

Inspection Type: Continuous

Shift Hours: 04:00 am 02:30 pm Break: 00:30 Over Time: 02:00

Federal ID:

Location:

Reviewer: Schmitt, Alex

Approved Date:

Status: Submit

04-0120F4
04-SF-80-13.2/13.9
Self-Anchored
Suspension Bridge

Weather

Temperature 7 AM 50 - 60 12 PM 60 - 70 4PM 60 - 70

Precipitation 0.00"

Condition Overcast in the AM to sunny in the PM

Working Day ☐ If no, explain:

Diary:

Dispute

Work description.

- Conducted and assisted the District 4 scanners on the final pre Load Transfer "control scan" of the east end of the SAS bridge and Skyway structures. Our definition of the "control scan" is the OBG top deck/tower/cable point cloud taken under uniform under ambient conditions. All other scans not done under uniform ambient conditions will be merged with "control point" point cloud location to counter the thermal expansion of the steel bridge. The shift began at 4:00am to set up the equipment as the first set of scans began at 4:40am. There were two crews scanning today, the first team was Robert Dolan and Randall Wigton on the W-Line. The other crew was made up of Jeremiah Bean and Paul Rogers on the E-Line.

A total of 6 scans were completed on the top deck of the OBG at the following locations:

SCAN108 = WPP106CL

SCAN208 = EPP106CL

SCAN109 = WPP123CL

SCAN209 = EPP123CL

SCAN110 = W-Line bridge

SCAN210 = E-Line bridge

To be specific the bridge mentioned above for points 110 and 210 were on the footbridge between the SAS and Skyway structures, see the photo below for more details. The vantage point on the footbridges provided a line of sight of the gap between the SAS/Skyway and the protruding Hinge A pipe beams from the Skyway. This point cloud from this setup could be merged with the scans taken from inside OBG lift 14E/W to tie in the overall bridge scan. The scans conducted on these bridges were done with extreme caution due to potential vibrations and thermal expansion of the bridge. The backsight and foresight checks between the two scanners was within tolerance indicating that there was no problems with movement during the scans on the footbridges.

The SAS/Skyway top deck and Mainspan cable scan was completed at 6:40am. The official sunrise time per weather.com was 5:57am, however the conditions were overcast at the time of completion. The ambient temperature throughout the "top deck control scan" was 53F. The steel temperature range on the top deck OBG and Skyway tub was from 53F to 55F. Temperatures were taken at the start and the end of the survey to verify that the "control scan" is valid. The wind speed was measured from the west northwest direction at 5mph during the survey.

Once the top deck survey was completed it was decided to scan the Hinge A pipe beams and SAS sleeves from inside OBG lift 14E/W. Robbie and Randy scanned the W-Line Hinge A pipe beams and Jeremiah and Paul scanned E-Line. A previously established ABF control point placed in the OBG was occupied. A



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backsight for each pipe beam was set outside the SAS OBG lift 14E/W which will be tied in with Caltrans SFOBB project control. Even though ABF surveyors used slightly different coordinates for control, the points will be checked with the backsight and should be sufficient regarding survey tolerances. Further the point cloud obtained from the SAS/Skyway footbridges could be merged by the cloud-to-cloud technique in postprocessing as another check to the point clouds/scans taken from inside OBG lift 14E/W. The scans inside of OBG lift 14E/W began after the "top deck control scan" and were completed by 9:00am. The ambient temperature at the end of the scans was 58F and the steel temperature on the SAS OBG top surface was 64F, see the photo below for more details.

- Wrote outstanding diaries for the last few days since I was working to complete processing surveying data for the Shear Keys and Bearings.

- Attended a Team Cable meeting at 1:00pm related to Load Transfer of the SAS bridge.

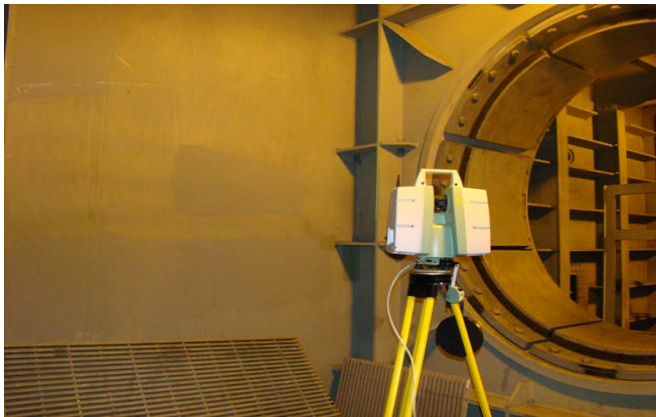
Attachment



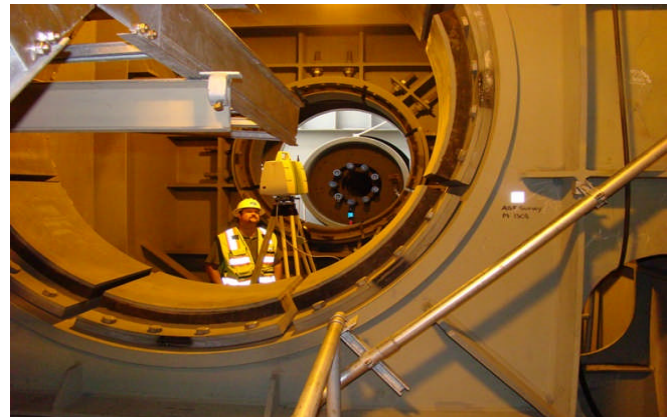
Ambient temperature of 58F and a steel temperature of 64F was observed after all scanning was completed essentially indicating no thermal expansion.



View of the scanning control survey along the W-Line looking west.



The green laser beam of the scanner is seen hitting the sleeve diaphragm stiffener plate.



Scanning inside of OBG lift 14E of the Hinge A pipe beams and corresponding sleeves inside of the SAS.

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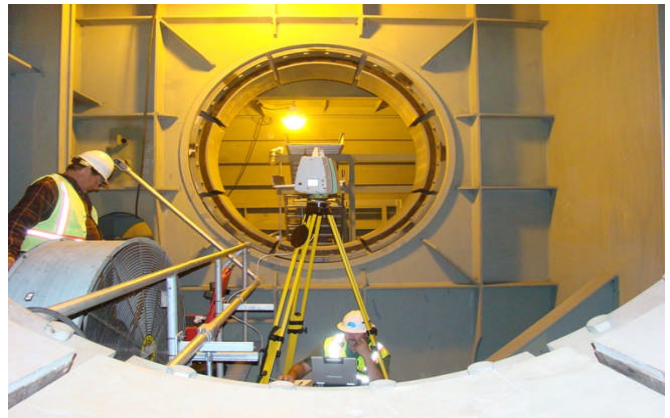
Overcast conditions were still present after the scans inside OBG lifts 14E/W were completed providing an accurate non control scan.



The Leica C10 scanner occupying control point WPP106CL performing the control scan under uniform ambient conditions.



The green laser beam of the scanner is seen on the foresight target of scan control point 110.



Jeremiah and Paul seen scanning inside of OBG lift 14E, Robbie and Randy did the W-Line.



The scanners were set on the SAS/Skyway footbridge to view the gap and Hinge A pipe beams between the bridges, scans were done with extreme caution.



Crew of Jeremiah and Paul operating the scanner along the E-Line of the bridge.

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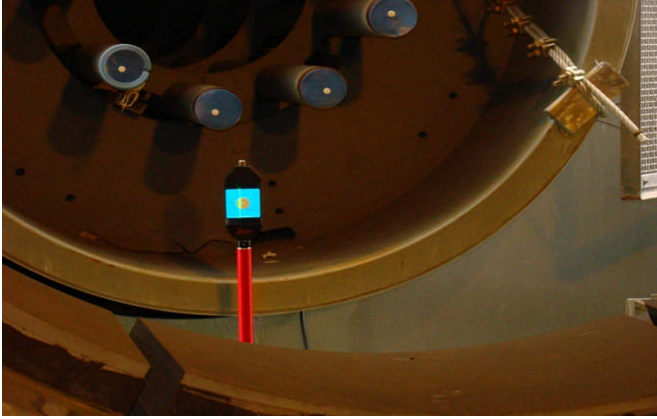
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Acquiring the backsight set on the Skyway falsework platform to bring Caltrans SFOBB project control into OBG lift 14E.



Robbie and Randy measuring the high of the Instrument (HI) before taking backsight, foresight, and scanning shots.